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B6E

Selected US specifications from IPC sub-class B42F

(54) Ring binder

(57) A ring binder comprises a front cover (6), a back cover (8), a spine in the form of a rod (1) and a plurality of rings (2) which are secured to the rod (1). Each ring consists of two halves which are pivotally connected by a pivot pin (3) at one end and which are provided at the other end with hooks (4) and recesses (5) which are mutually engageable with one another to secure the two ring halves together in a releasable manner. A set of leaves (7) of paper, card or like material are mounted on the rings (2) between the covers (6 and 8) and the rings (2) are so connected to the rod (1) that the pivot pins (3) are located adjacent to the rod (1) so that the front cover (6) and any desired number of leaves (7) can be moved around the rings (2) to a position in which the front cover (6) and the said desired number of leaves lie under the back cover (8). In this manner, the binder takes up little space when in use and is convenient to handle.

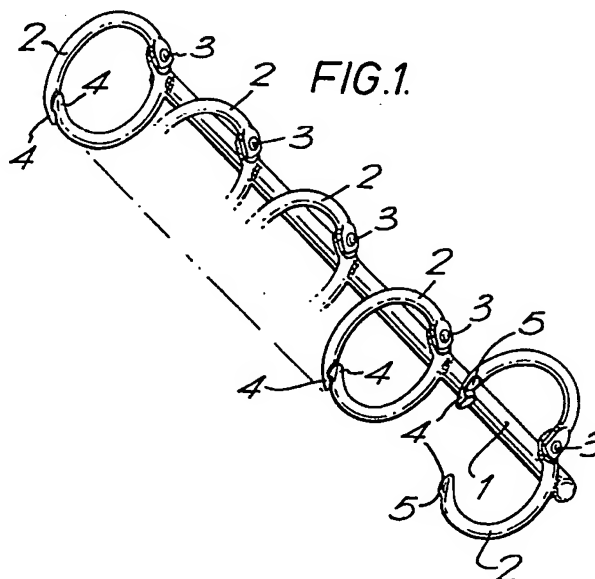
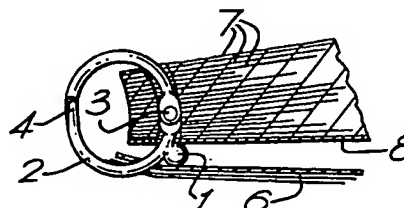


FIG. 2.



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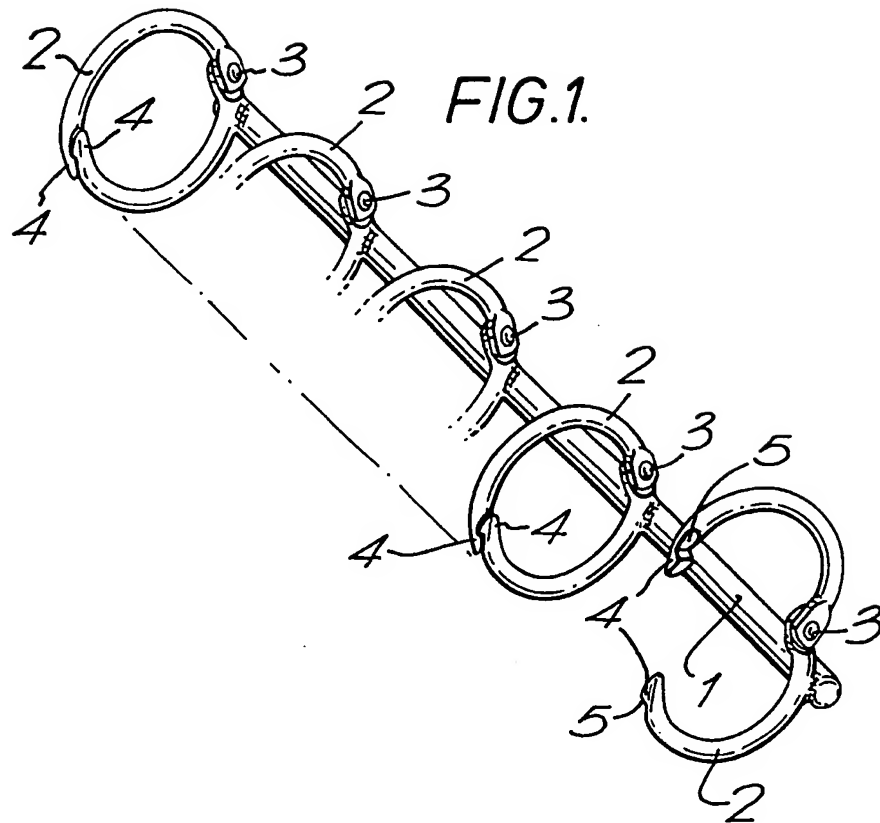
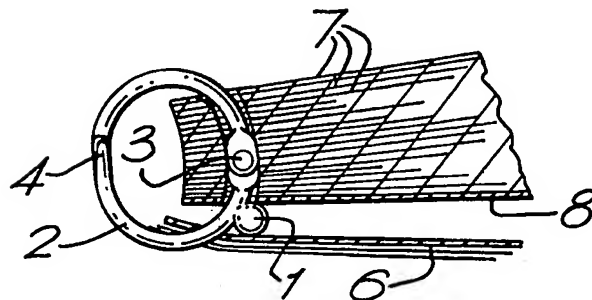


FIG. 2.



SPECIFICATION

Improvements in ring binders

- 5 This invention relates to improvements in ring binders.

Conventional ring binders usually consist of front and back covers which are connected to a central spine on which rings are mounted for securing a number of sheets of paper, card or like material between the covers. A major disadvantage of the conventional ring binders is that the spine does not allow the front cover to be folded back onto the back cover. Thus, the conventional ring binders are not convenient to use and they take up a lot of space when in use.

The present invention aims to provide a ring binder which avoids the above-mentioned disadvantage by allowing the front cover to be folded back onto the back cover.

According to the invention, there is provided a ring binder which comprises a front cover, a back cover, a spine and a plurality of rings, wherein the spine comprises a rod to which the rings are connected and wherein the front and back covers are mounted on the rings, at least the front or back cover being movable relative to the spine to permit the covers to be moved adjacent to one another with one cover overlying the other.

According to a preferred embodiment of the invention, both of the covers are freely movable on the rings relative to the spine. However, in an alternative embodiment, either the front or the back cover may be secured to the spine. In the latter embodiment, the back cover is preferably secured to the spine.

Preferably, each ring consists of two halves which are pivotally connected together at one end and which are provided, at the other end, with mutually engageable connecting means which are releasable whereby the connecting means can be disengaged and the two halves of each ring pivoted away from each other to permit leaves to be inserted or removed from between the covers after which the two halves of each ring are pivoted towards each other and the connecting means re-engaged.

The rings are desirably connected to the spine adjacent to the pivot points of the ring halves.

The invention will now be further described, by way of example, with reference to the drawings, in which:

Fig. 1 is a perspective view of a spine and rings of one embodiment of a ring binder according to the invention; and

Fig. 2 is an end elevation of part of a ring binder according to the invention equipped with the spine and rings shown in Fig. 1.

Referring to the drawings, the spine of a ring binder according to the invention takes the form of a rod 1 to which five binder rings 2 are secured, for example by soldering. Each ring consists of two halves which are pivotally

connected by pivot pins 3 at one end and which are provided at the other end with hooks 4 and recesses 5 which are mutually engageable to secure the two ring halves together in a releasable manner. One half of each ring 2 is secured to the rod 1 adjacent to the pivot pin 3. Fig. 1 shows the halves of one of the rings 2 in the open disengaged position and the halves of the other rings 2 in the engaged, connected position. It will be appreciated that the halves of each ring are movable independently of the halves of the other rings.

Turning now to Fig. 2, a front cover 6, a back cover 8 and a series of leaves 7 of paper, card or other suitable material are mounted on the rings 2 by first separating the ring halves and then first engaging the back cover 8 onto the ring halves so that the back cover is located between the pivot pins 3 and the spine rod 1. The leaves 7 are then engaged on the ring halves in any desired order so that they overlie the back cover after which the front cover 6 is placed on top of the uppermost of the leaves 7. The ring halves are then pivoted towards one another so that the hook 4 of each ring half engages in the recess 5 of the other respective ring half.

With this arrangement, it is possible to fold the front cover 6 back onto the outside of the back cover 8 so that it lies substantially parallel to the back cover. Any number of leaves 7 may also be folded back with the front cover 6, as shown in Fig. 2, so that the information contained on any desired leaf can be read while the binder itself takes up little space and is convenient to handle.

It will thus be seen that the ring binder according to the invention provides a considerable improvement over the conventional ring binders.

The rod is preferably made of mild steel bar and the rings are desirably secured to the rod by silver soldering after which the rod and rings may be silver plated. However, this is not essential and the rod and rings may be made of any suitable material and the rings may be secured to the rod by any suitable means such as brazing, welding or even adhesive bonding.

Further, although the spine shown in the drawings has five rings secured to it, this is not essential and any suitable number of rings may be provided. It should also be noted that the invention is not restricted to the embodiment illustrated in the drawings but variations and modifications may be made without departing from the scope of the invention.

CLAIMS

1. A ring binder which comprises a front cover, a back cover, a spine and a plurality of rings, wherein the spine comprises a rod to which the rings are connected and wherein

the front and back covers are mounted on the rings, at least the front or back cover being movable relative to the spine to permit the covers to be moved adjacent to one another

5 with one cover overlying the other.

2. A ring binder according to claim 1, wherein both of the covers are freely movable on the rings relative to the spine.

3. A ring binder according to claim 1,
10 wherein either the front cover or the back cover is secured to the spine.

4. A ring binder according to claim 3, wherein the back cover is secured to the spine.

15 5. A ring binder according to any preceding claim, wherein each ring consists of two halves which are pivotally connected together at one end and which are provided, at the other end, with mutually engageable connecting means which are releasable whereby the
20 connecting means can be disengaged and the two halves of the rings pivoted away from each other to permit leaves to be inserted or removed from between the covers after which
25 the two halves of each ring can be pivoted towards each other and the connecting means re-engaged.

6. A ring binder according to claim 5, wherein the rings are connected to the spine
30 adjacent to the pivot points of the ring halves.

7. A ring binder according to any preceding claim, wherein the spine consists of a metal rod and wherein the rings are secured to the rod by soldering, brazing, welding or adhesive
35 bonding.

8. A ring binder substantially as described herein with reference to the drawings.

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